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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,879	05/30/2002	Jorunn Nilsen	09100.024	6277

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ARLINGTON, VA 22203

EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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01/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/049,879

Applicant(s)

NILSEN ET AL.

Examiner

Jeff Wollschlager

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 30, 2007 has been entered.

Response to Amendment

Applicant's amendment to the claims filed October 30, 2007 has been entered. Claims 11 and 13 are currently amended. Claims 11-13 are pending and under examination.

Claim Objections

Claims 11-13 are objected to because of the following informalities: the MFR21 values need to have units (e.g. g/10 min). Appropriate correction is required.

Specification

The abstract of the disclosure is objected to because the word bimodal is misspelled "biomodal". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Debras et al. (US 6,221,982) as evidenced by Page (US 4,617,352) in view of either of Harlin et al. (US 6,090,893) or Barry et al. (US 6,403,181) and in view of either of Suttoni et al. (US 6,126,033) or McWhorter (US 4,391,128).

Regarding claims 11-13, Debras et al. teach a bimodal polyethylene wherein an ethylene homopolymer having a melt index of 5 to 200 g/10 min is combined with an ethylene copolymer (Abstract; col. 3, lines 60-66; col. 4, lines 8-30 and 46-64) to form a bimodal polyethylene having a MFR of 5 to 40 g/10 min. The bimodal polyethylene has a polydispersity of 10 to 20 which overlaps the claimed range. Further, the density set forth in Debras et al. is 0.935 to 0.955 g/cc and is more preferably 0.940 to 0.950 g/cc. Table 1 of Debras et al. disclose weight average and weight number molecular weights within the claimed ranges. The examiner notes that Debras et al. is not limited to the exact polydispersity values set forth in the Table 1 and reasonably suggests values wherein the weight average molecular weight, number average molecular weight, and polydispersity would all lie within the claimed ranges.

Regarding the molecular weight of the homopolymer, Debras et al. disclose the MFI of the homopolymer is 5 to 200 g/10 min. Page provides evidence suggesting that polyethylene material having these MFI values would have a molecular weight ranging from about 31,000 to about 94,000 (using the formulas found at col. 5, lines 18-45). Debras et al. do not teach a comonomer content of 1 to 2 wt. % or that a blow molded container having a volume of at least 8 liters is produced.

However, Harlin (col. 2, lines 22-35; col. 3, lines 48-65) and Barry (col. 1, lines 44-52; col. 4, lines 15-20) each individually disclose analogous methods wherein the comonomer content is optimized to produce desired results such as improved crack resistance. Further, Barry et al. also teach the resins may be blow molded into articles (col. 4, lines 15-20) such as bottles, containers, fuel tanks and drums. Furthermore, each of Suttoni (col. 2, lines 6-60) and McWhorter (col. 1, lines 15-57; col. 2, lines 54-58) individually disclose blow molded polyethylene containers with a volume greater than 8L are known.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have blow molded the resin disclosed by Debras et al. into a container having a size of at least 8 liters and to have optimized the comonomer content as suggested by each of Harlin and Barry for the purpose of improving properties, such as stress cracking (Harlin: col. 3, lines 48-57), and as suggested by each of Suttoni and McWhorter, in order to produce a desired product having a commercially viable size.

Moreover, the examiner notes that the combination sets forth the same claimed bimodal polyethylene material having the same claimed molecular weights, density, polydispersity, melt flow rate, and comonomer content. Accordingly, it follows that the bimodal polyethylene set forth in the combination would have the same properties as claimed (i.e. tensile modulus). Further, since the same claimed bimodal polyethylene is employed in the combination and

produces the same claimed product by following the same claimed steps, the examiner submits that the same claimed physical properties and effects (i.e. ESCR) would be realized by the practice of the method set forth in the combination.

Response to Arguments

Applicant's arguments filed October 30, 2007 have been fully considered and are persuasive regarding the Morimoto reference. Namely, Morimoto does not teach or suggest the claimed molecular weight of the homopolymer and the overall polymer density and MFR as set forth in the claims in the same resin at the same time and having the required ESCR.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1791

January 18, 2008

af
CHRISTINA JOHNSON
SUPERVISORY PATENT EXAMINER